

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: July 21, 1997
Date Received: July 14, 1997
Project: Metro Grab, PO #M57810
Date Samples Extracted: July 16, 1997
Date Extracts Analyzed: July 17, 1997

**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE
FOR CHROMIUM, COPPER, NICKEL, ZINC
USING METHOD 6010**

Samples Processed Using Method 3005A
Results Reported as mg/L (ppm)

<u>Sample ID</u>	<u>Chromium</u>	<u>Copper</u>	<u>Nickel</u>	<u>Zinc</u>
M57810	0.35	0.22	0.25	<0.05
Method Blank	<0.05	<0.05	<0.05	<0.05

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ENVIRONMENTAL CHEMISTS

Date of Report: July 21, 1997
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**QUALITY ASSURANCE RESULTS FOR
 THE ANALYSIS OF WATER SAMPLES
 FOR TOTAL METALS BY
 INDUCTIVELY COUPLED PLASMA (ICP)
 (METHOD 6010)**

Laboratory Code: 79430 (Duplicate)

<u>Analyte:</u>	<u>Reporting Units</u>	<u>Sample Result</u>	<u>Duplicate Result</u>	<u>Relative Percent Difference</u>	<u>Acceptance Criteria</u>
Chromium	mg/L (ppm)	0.49	0.47	4	0-20
Copper	mg/L (ppm)	0.37	0.37	0	0-20
Nickel	mg/L (ppm)	0.58	0.57	2	0-20
Zinc	mg/L (ppm)	0.08	0.06	29 a	0-20

Laboratory Code: 79430 (Matrix Spike)

<u>Analyte:</u>	<u>Reporting Units</u>	<u>Spike Level</u>	<u>Sample Result</u>	<u>% Recovery</u>		<u>Acceptance Criteria</u>	<u>Relative Percent Difference</u>
				<u>MS</u>	<u>MSD</u>		
Chromium	mg/L (ppm)	5	0.49	98	97	80-120	1
Copper	mg/L (ppm)	5	0.37	96	97	80-120	1
Nickel	mg/L (ppm)	10	0.58	98	96	80-120	2
Zinc	mg/L (ppm)	5	0.08	95	96	80-120	1

Laboratory Code: Spike Blank

<u>Analyte:</u>	<u>Reporting Units</u>	<u>Spike Level</u>	<u>% Recovery</u>		<u>Acceptance Criteria</u>	<u>Relative Percent Difference</u>
			<u>MS</u>	<u>MSD</u>		
Chromium	mg/L (ppm)	5	101	102	80-120	1
Copper	mg/L (ppm)	5	101	101	80-120	0
Nickel	mg/L (ppm)	10	102	103	80-120	1
Zinc	mg/L (ppm)	5	101	102	80-120	1

a - The analyte was detected at a level less than five times the detection limit. The RPD results may not provide reliable information on the variability of the analysis.

AI


7-14-97

10:35

SAMPLE CHAIN OF CUSTODY

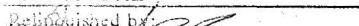
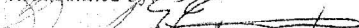
Send Report To: Alaskan Copper Works Contact GERARD Thompson
Company 628 HANSON ST.
Address Seattle WA 98134
City, State, Zip 382-8339 FAX # (206) 382-4309 Date 7-14-97
Phone # (Area)

SITE NO	PROJECT NAME	PURCHASE ORDER #
238	METRO 6000	M 57810

SAMPLERS (signature)	PROJECT LOCATION
	3200 6 th Ave S.

REMARKS	SAMPLE DISPOSAL INFORMATION	
	<input type="checkbox"/>	Dispose after 30 days
	<input checked="" type="checkbox"/>	Return Samples
	<input type="checkbox"/>	Call for Instructions

[illegible]

SIGNATURE	PRINT NAME	COMPANY	Date	Time
Delivered by: 	GERALD A. Thompson	ACLU	7/14/97	10:30
Received by: 	MANUEL MARTI	FLBT	7-14-97	10:30
Delivered by:				
Received by:				

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Beth Albertson, M.S.
Charlene Jensen, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.
Melanie Kirol, B.S.
July 21, 1997

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

**INVOICE # 97ACU0721-1
DUPLICATE COPY**

Accounts Payable
Alaskan Copper Works
628 South Hanford St.
Seattle, WA 98134

RE: Project Metro Grab, PO #M57810: Results of testing requested by Gerry Thompson, Project Manager for material submitted on July 14, 1997.

1 water sample analyzed for
Chromium, Copper, Nickel, and Zinc
using Method 6010 @ \$65 per sample

\$ 65.00

Amount Due

\$ 65.00

FEDERAL TAX ID # (b) (6)

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e-mail: fbi@isomedia.com

July 21, 1997

Gerry Thompson, Project Manager
Alaskan Copper Works
628 South Hanford St.
Seattle, WA 98134

Dear Mr. Thompson:

Included are the results from the testing of material submitted on July 14, 1997
from your Metro Grab, PO #M57810 project.

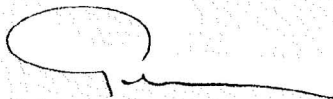
We appreciate this opportunity to be of service to you and hope you will call if you
should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Kurt Johnson
Chemist



keh
Enclosures
ACU0721R.DOC